

ABSTRACT

Off-Axis Levelling in Lithographic Projection Apparatus

5 In an off-axis levelling procedure a height map of the substrate is generated at a measurement station. The height map is referenced to a physical reference surface of the substrate table. The physical reference surface may be a surface in which is inset a transmission image sensor. At the exposure station the height of the physical reference surface is measured and related to the focal plane of the projection lens. The height map
10 can then be used to determine the optimum height and/or tilt of substrate table to position the exposure area on the substrate in best focus during exposure. The same principles can be applied to (reflective) masks.

Fig. 8